

ABSTRACT

The object of the present invention is to provide a nano-scale molecular assembly such as a conductive nano-wire.

Specifically, there is provided an electrolytic apparatus for forming a molecular assembly, including two electrodes and an electrolytic cell holding an electrolyte and the two electrodes, wherein the gap between the two electrodes is from 1 nm to 100 μm , by allowing the electrolytic cell to hold an electrolyte containing molecules that is to constitute the molecular assembly, and applying a voltage across the two electrodes in the state wherein the electrolyte and the two electrodes are in contact.